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ABSTRACT

A preliminary study examined what kind of writing goes on at a the university: what faculty assign; how they see the function of writing; and what they see as "good" writing. Survey respondents were 1300 regular faculty and teaching assistants in the liberal arts and sciences, with follow-up interviews of 17 selected faculty. The 103 item survey and interviews were voluntary; the return rate was almost 15% (107 of 562 faculty and 84 of 741 teaching assistants). Results indicated most faculty's use of writing in the classroom is of the learning-to-write variety--only sparse samples of writing-to-learn practices were found. Findings suggest that, while some faculty are concerned about writing, they may not be able to make their implicit understandings of writing explicit; nor are all aware of the broader potential of writing for their teaching. Faculty vary in how they view the function of writing: many regard it as a way for students to display what they know in the course; a few see it as a way for students to learn what they did not know before; and some understand it to be an intrinsic element of their discipline. The language teachers used to characterize good writing varied by discipline; those in the arts used words like "creative," "imaginative"; those in the humanities used "vivacious" and "eloquent"; those in the sciences used "analytical" and "theory-driven." (Contains 9 references, an outline, and a factor analysis of terms for "good writing".) (CR)

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CCCC Presentation--Phoenix, Thursday, March 13, 1997

Panel: "Just What Writing Goes on Here?:

Research Implications for Teaching and Learning"

Speaker #2: Sandra Zerger, Bethel College, North Newton, KS

"This is Chemistry, Not Literature": Faculty Perceptions of Student Writing

Overview of the study

We were interested in finding out what kind of writing goes on at the university: what faculty assign, how they see the function of writing and what they see as "good" writing. The study is on-going, so the findings I will discuss are preliminary. (*a)[1] For this first phase, we surveyed the 1300 regular faculty and teaching assistants in the College of Liberal Arts and Sciences, and then followed up with in-depth interviews of 17 selected faculty. In the next phases, we will survey and interview the students in the College and the faculty and students in the professional schools. The survey and interviews were voluntary; the return rate for the surveys was almost 15 per cent (N=191: 107 of 562 faculty; 84 of 741 teaching assistants.) The survey contains 103 items, including demographic information, questions about writing in general, questions on technology and writing, questions on writing types, and questions on the what is "good" writing. We interviewed faculty whom we felt would represent a variety of views about writing and who represented a cross-section of disciplines. We then analyzed both types of data. For the quantitative data, we ran frequencies, cross tabulations, analysis of variance, and a factor analysis. With the interviews, we transcribed all the seventeen interviews and then analyzed them for recurrent themes.

Instructors' Understanding of the Purpose of Writing

Our study data suggest that by far most faculty's use of writing in the classroom is of the learning-to-write variety; we found only sparse examples of

[1]An asterisk and a letter in parenthesis denotes an overhead, which can be found at the end of this paper.

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writing-to-learn practices.

(*b) Susan McLeod proposes that we think of writing to learn as "knowledge-transforming" rather than merely "knowledge-telling" (4).[2] Over 85 per cent of the respondents to the survey said that they always or frequently design assignments to "encourage students to explore ideas," although few of those we interviewed identified this generative capability of writing. One who did was a professor who assigned journals so that students could learn to "think economics," as he put it. Others valued the learning that could result from the process itself. A humanities professor spoke of using writing to take "students to a higher level of thinking,"or apply "how theories have been at work in their lives." Beyond reflection, writing for learning can help students reinforce their learning. A science professor uses writing to help students confirm what they know: "If they know how to communicate the idea, they understand the idea." Less idea-generating but equally confirming, writing in a foreign language class becomes a means to "reinforce the grammatical information [the students] are learning."

These knowledge-transforming uses of writing were the exception. We should not be too surprised by these findings, however. Chris Anson notes that, *theoretically*, writing is "ideally suited for the discovery, formulation, and expression of ideas" (19).[3] In reality, though, "at the college level, writing is not used as often to foster thinking and learning (or, for that matter to improve writing abilities) as it is to measure the retention of facts and details" (Anson 12). The few cases of writing-to-learn, then, we were able to glean from the data include: the use of journals, reinforcing class concepts (as in a language class), and applying models presented in class.

(*c) Most faculty responded in the learning-to-write mode. Students need to

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[2] For further information on the "knowledge-telling" function of writing, see Bereiter and Scardamalia.

[3]This theoretical stance, Anson points out, has been delineated by Emig, Beach, Bridwell, and Yates.

learn to write as students in the academy, as students in their majors, and as students who will join the work force.

For the most part, faculty in the disciplines tend to view writing as a means of evaluating students. They feel that writing is something students should know by the time they come to their classes. Either students should know how to write by the time they arrive at college (or take a "remedial" freshman English course), or they should learn by the time they are through the freshman writing courses. Into this mold of writing skills, the faculty member, then, can pour the content of the field. Ninety-three per cent said that the writing skill affects the grade of the students. The majority also say that most of their "writing assignments are designed to encourage students to display knowledge about the course." The social sciences faculty felt the strongest on this item with the natural scientists next followed by the arts and humanities. Writing to the faculty, then, besides being transferable and generic, comes after thought--it is a recording of thought. As such, it is linear.

Some faculty saw the function of writing as helping students learn how to communicate in the disciplines, as a social scientist or as a communication major, for example. "This is chemistry, not English literature," one scientist said in response to the survey. His response shows some discipline-specific understanding of writing. Specific discipline-related items I'd like to point out include: 1) how to structure a paper, 2) how to reference sources, 3) how to signal disagreement, and 4) what constitutes a "good" paper.

Structure

The convention of *structure* (*d) includes the "rhetorical moves" (Linton, Madigan, and Johnson 67) of a discourse community--signposts to announce organization, signal main points, and indicate objectives. For those regarding writing from primarily a curricular perspective, structure is primarily a matter of order while for those moving students toward professional writing, it signals argumentation and logic as well. Other structural conventions include thesis

statements and transitional markers (*e). A full 81.5 per cent of the respondents (reporting about an undergraduate class) agreed that "written papers should begin with an explicitly stated thesis statement." Only humanities disagreed. Illogical transitions make arguments difficult to follow, according to a science professor. Likewise, a social scientist valued the logic that transitional indicators signal: "I get problems with [the lack of] transitional signals--like going from one [index] card to the next without [writers] signaling why."

Disciplines differed on the use of formatting devices and visuals to structure an argument. The "best student papers," according to one social science professor, use "correct paragraphs with subheadings" to signal structure. Quantitative data backed up this call for headings, with only the humanities respondents disagreeing on the extent of their usefulness as a structural convention (Chi Square $p<.05$). Value of visuals in writing differed by discipline. A scientist emphasized that he regards visuals as writing: "If you include structures and graphs and charts, and so on [as writing], it is vital to chemistry. If they can't [write], they will not pass the course, basically." In contrast, humanities faculty said that they "never" or "seldom" feel that "[v]isuals such as illustrations, charts, and graphs are important to a document." Social scientists and scientists thought these were "frequently" or "always" important. (Chi Square $p<.001$).

Reference

The convention of *reference* (*f) involves managing the information of the field through the use of citations, evaluation of sources, and methods of incorporating quotations (*g). Seventy per cent of those commenting about an undergraduate course in the survey said that they prefer a specific citation format. There the agreement ends. In a pilot project for this study, faculty from 14 fields reported preference for seven different citation systems. (McQueeney and Jones 4). The quantitative reports on our survey echo this multiplicity of expectations. A question on the appropriateness of footnotes at the bottom of the page earned significant disagreement (Chi Square $p<.05$), although humanities faculty were less

emphatic than the sciences and social sciences. Nor are departments always consistent internally. Some departments agree on a single citation format; others vary by individual advisers.

Although citation formats are an obvious demonstration of *reference*, managing information is a more complex issue involving both evaluation of sources and incorporation of quotations. Here, the choices are driven by the expectations of the community. Information management includes accuracy and specificity, as well as the integration of references into the discourse. Over 80 per cent of the social scientists agreed or strongly agreed with the need for undergraduate students "to incorporate specific references to scholarship of the field into their writing" (Chi Square $p<.05$). In contrast, humanities respondents commenting about undergraduate courses were evenly split between those who agreed with incorporating references and those who disagreed. In answer to "Quotations from scholarly sources enhance writing," respondents preferred "sometimes." (Chi Square $p<.05$).

Language

The conventions of language (*h) , according to Linton, Madigan, and Johnson, involve the nuances of language typical of a discourse community (72). Categories they note include language operating variously as medium or product (i. e., texts to communicate versus texts as celebration of language) and language to signal disagreement and to express conviction (73-74).

Although the ability to signal disagreement begins with learning how to write about a source, full command of the skill emerges as writers develop a more abstract and sophisticated rhetoric (Geisler, "Literacy" 43). Cheryl Geisler says, "In each area of specialization,...students must actually be untaught the distrust of personal opinion and contextualized understandings that has been drummed into them through the period of general education" ("Literacy" 49). Clearly, some professors expect students to develop the ability to state conviction, though. A social scientist reported, "One of the things that we expect in [our] courses is a type of writing

which is not necessarily the kind of writing that is taught in freshman English courses. . . .We're not interested in what the student feels, or thinks," he emphasized. He explained that in his field "students as they get more knowledgeable are encouraged to take an issue...and then to justify the particular approach they take, but again it must be done on a factual basis and not simply saying, 'I like this one better.'"

What is the language that teachers use to characterize effective writing? (*i) We were interested in the terms faculty use to describe "good" writing. The questions we asked used terms faculty listed for a Glossary Project sponsored by a WPA Grant (McQueeney and Jones). The terms ranged from *interesting*, and *bold* at one end of the spectrum to *precise and succinct* and *accurate in punctuation and grammar* on the other end. We used the Varimax rotation procedure in the factor analysis to confirm our hypothesize that certain words would cluster. We found that these terms differ by discipline. (Wilks Multivariate Test of Significance: Value =.63581; Approx F = 3.10988; DF = 24.00; Significant = p<.0001) (*j). The humanities faculty tended to describe "good" writing by the terms: *clever in word play, vivacious, eloquent, aesthetically satisfying,* and *natural*. (*k). The social scientists preferred: *non-trivial, relevant, plausible,* and *significant*. Those in the arts: *creative, imaginative, interesting,* and *persuasive*. The natural scientists: *theory-driven*, and *analytical*. A generic category included: *clear, precise and succinct, organized, accurate in punctuation and grammar, cohesive,* and *understandable*. (*l). This last category appears to be the transferrable qualities of writing. The fact that some of the terms cross loaded or had problematic values in the factor analysis probably suggests that terms vary in level of precision; that is, some terms are fuzzy in meaning. Especially noteworthy terms include: *bold, insightful, well-reasoned, imaginative, interesting, eloquent, persuasive,* and *thoughtful* . These terms did not cluster nicely with other terms used by the faculty in the disciplines, or they were used by faculty in several disciplines. *Thoughtful* was the only value term that not a single respondent listed in the "least important" category. Interestingly,

though, the term never was mentioned in the interviews as an attribute of "good" writing.

Anson describes *professional* writing (*m) as "academic discourse used to mediate among experts in a given field and advance the field's base of knowledge" (4). The faculty we interviewed were seldom able to put their students in a true professional situation. Only 21% of the survey respondents said that they frequently or always "expect students...to write as they would for colleagues in...[the] field of study." Nevertheless, they were interested in preparing them for careers; 52% of survey respondents said that they frequently or always "design writing assignments to help students improve communication skills for their careers." Perhaps not surprisingly, given the fact that these respondents are liberal arts professionals, most equated professional writing with the kind of writing they do as professors. They seldom included the kind of writing students in their majors would do in the workplace outside the academy.

Professional Writing in Academia

For most, learning to write as professionals meant learning to write for professional journals. "[I]f you're teaching at a university, you have to write test questions (so a lot depends upon the job), but the major concern for me is being able to write professionally for publication and journals, [and] books," one professor said. A scientist observed that "writing to various agencies and foundations is important. That provides the resources we need to carry out our research. We also have to defend and propose things to the administration to keep our academic programs viable and active." Some assignments promote learning to write as professionals, such as encouraging students to critique each other's papers or to share seminar papers. These assignments help situate students in the conversation of the discipline and occasionally yield a product that is accepted at a conference. Several natural scientists also talked about having their students attend conferences to give poster presentations.

Professional Writing in the Workplace

One might assume that part of the teaching of students to become experts is knowing what will be required of them after they leave the academy. Several faculty, however, hedged or requested additional prompts on the interview inquiry of how students learn to write as a workplace professional associated with their field of study. Some acknowledged that they did not know much about the writing their students would be likely to encounter outside academia; others said they assumed on-site mentoring would be available to help new employees adapt to workplace writing expectations. The professors who were familiar with workplace expectations attempted to incorporate genres likely to be encountered at work: public relations copy, press releases, memos, letters, field and technical reports, and policy papers, and proposals. As one scientist pointed out, proposals have specific rules to govern them: "[I]n most of the sciences, it is extremely important to be concise and very accurate in your verbal and written descriptions of what you are doing." A humanities professor active in consulting knew what his work-world contacts expect: "In government and private business, the writing would probably consist largely of reports on given situations...where one would be expected to be able to lay out the positions... and describe them in detail."

On the survey, we asked respondents to indicate the types of writing that occur in the indicated course. Included were the names of various writing types (or genres), such as analytical papers, memos, cases analyses, essays and also definitions of these genres, such as "papers that take concepts apart and put them back together in new ways." We found that the terms and the definitions did not match significantly. Those data along with the numerous ways terms were used in the glossary project and in the interviews suggest that different disciplines use the same terms differently. Terms such as *essay, thesis, and abstract* have long entries in the Glossary. In the case of *abstract*,, 75% of the survey respondents said they require abstracts in classroom writing. Yet, they seem to use the term differently. One professor, for example, used this term to mean a review article on the topic, with the first eight to nine pages being text and drawings, graphs, and equations, and the last

page or so being references. That's very different from how others use the term to mean a paragraph or two at the beginning of the paper to summarize the paper. One faculty member, for example, said he did not use the term *thesis* for the statement which announces the purpose of the paper because he reserves the term for the thesis written as the final project in a master's program. Several equated *essay* with any paper written for a class rather than a particular type or genre of writing.

Nature of the writing experience

What is the consistency of the writing experience over the course of a semester, within a single course? (*n). Across the disciplines, 60% of the faculty tend to assign one to three writing assignments per course, which may translate to two exams and a research paper. The number of assignments is higher in the natural sciences where students write lab reports, have problem sets, plus exams. When asked if they favor spreading out writing assignments over the semester, only the social scientists said, "No." Most think they do, although the percentage assigning a maximum of three types of writing of any kind suggest otherwise.

Likewise, when asked if they favor establishing interim deadlines, they said that they do, but their other answers indicate that they don't. For example, faculty value the product over the process writing. Evidence for this finding seems abundant. Most do not require multiple drafts of papers (never-24%, seldom-15%, sometimes-18%). The natural scientists never require multiple drafts; the interdisciplinary faculty tend to do so; the social scientists do not agree on this item; and the humanities are weighted toward multiple drafts.

Extra-disciplinary influences on writing

The understanding faculty have of the conventions of written discourse in their discipline influences their use of writing with their students. Complicating this understanding are extra-disciplinary factors including pedagogical and institutional ones.

By the time faculty such as these become professionals, their expertise

includes a mental template of how writing functions in their discipline and what the accepted conventions are. It is against this template that they judge student writing, usually unknowingly utilizing such a template. Linton, Madigan, and Johnson comment, "Many faculty would be surprised at the disciplinary differences identified by studies in composition; they share with some English faculty the assumption that good writing is readily identifiable and that good writing in one setting is good writing in another" (75). When writing is seen—as it is here—as a set of transferable skills, responsibility for teaching those skills can be deferred to others. Perhaps because writing is understood tacitly by faculty, they, at times, draw on their own prior curricular writing experiences to shape their assumptions; these earlier experiences may lead them to think of writing very differently from the way current composition theorists do. Two, for example, thought that freshmen composition still included "parsing" and "sentence diagramming." In these cases their prior experiences were informing their current writing standards, which are product-producing rather than process-oriented. The assumption is that "background training" can be taught by writing specialists—read "English Department"—and that the necessary skills can be transferred to content areas to be used by those faculty to teach their subject areas.

In addition to pedagogical influences, institutional factors influence the use the faculty makes of writing. The lack of institutional support for writing, the sheer size of some sections, restricted funding, and trends in technology modify the uses made of writing in liberal arts, according to respondents. Jim has suggested some of these institutional factors; Pat will examine them more as she considers the ramifications on students.

Caveat, Suggested Research, and Conclusion

The usual return rate for a voluntary survey at the University of Kansas is 25%; in spite of follow up cards, we still only got a 15% response. The faculty who responded to the survey, therefore, may not be representative of the entire faculty. We plan to conduct further interviews to check the validity and reliability of our

study. We assume that this study is in the nature of a case study; we may have the most interested faculty who answered the survey (*o). While some faculty are concerned about writing, we found that they may not be able to make their implicit understandings of writing explicit. Nor are all aware of the broader potential of writing for their teaching. Faculty vary in how they view the function of writing: many regard it as a way for students to display what they know in the course; a few see it as a way for students to learn what they did not know before; and some understand it to be an intrinsic element of their discipline. And, we found that there are true disciplinary differences, not only in conventions regarded as acceptable but also in the vocabulary used.

Even though this study may not be a cross-section of the faculty, the comments we have may lead us to ask what is out there to undermine a just system at the university. There may be reasons why we must approach student writing systematically and institutionally. For example, how students are getting access to the technology--a big issue of justice--needs to be asked. Faculty need to realize that the functions of writing may vary from discipline to discipline and from individual to individual, so they can clarify their own expectations to students. Pat McQueeney will now further the discussion of how these faculty perceptions affect students' educational experiences.

Overheads

a. Survey Questionnaire
- 1300 regular faculty and TAs in CLAS
- N = 191: 10 of 562 faculty; 84 of 741 TA
- 103 items including:
    - demographic information
    - writing in general
    - technology
    - writing types
    - values

b. Writing-to-learn:
- writing to discover meaning
- writing to transform meaning
- strategies include:
    --process logs
    --precis writing
    --short writings mid-lecture or mid-discussion
    --journals
    --annotated bibliographies

c. Learning-to-write
- discipline-specific
- shared assumptions
- shared knowledge
- shared evidence and validation

d. Structure (rhetorical moves)
- organization
- announcement of main ideas
- transitions
- paragraphing and subheadings
- use of visuals

e. Structure Questions
- Written papers should begin with an explicitly stated thesis statement. (82% agreed. Humanities disagreed.
- Headings and subheadings are useful document dividers. (Significant disagreement by disciplines. Chi-Square $p < .05$)
- Visual such as illustrations, charts, and graphs are important to a document. (Significant disagreement by discipline. Chi-Square $p < .001$)

f. Reference (managing information)
- citations
- evaluation of sources
- methods of incorporating quotations

g. Reference Questions
- Prefer a specific format. (70% agree)

- Footnotes at bottom of page. (Significant disagreement by discipline. Chi-Square p<.05)
- Students need to incorporate specific references to the scholarship of the field into their writing. (Significant agreement. Chi-Square p<.05
- Quotations from scholarly sources enhance student writing. (Significant agreement. Chi-Square p<.05)

h. Language

- communicate vs. celebrate
- signal of disagreement
- expressing conviction

i.

FACTOR ANALYSIS OF TERMS FOR "GOOD" WRITING

Category	*Terms for Wr. Values*	*Factor 1*	*Factor 2*	*Factor 3*	*Factor 4*	*Factor 5*	*Factor 6*	*Factor 7*
Celebratory (Humanities)	clever w/ word play	.75605						
	vivacious	.71074						
	eloquent	.69095			.35910			
	aesthetically satisfying	.58902						
	natural	.42668						
Generic	clear		.72797					
	precise and succinct		.65695					
	organized		.62814					
	accurate in punc./grammar		.60426					
	cohesive		.58682					
	understandable		.52110	.36021				
Cognitive (Social Sc.)	non-trivial			.72773				
	relevant			.58101				
	plausible			.56693				
	significant			.53686				
Creative (Arts)	creative				.76793			
	imaginative	.30286			.72099			
	interesting	.38274			.46445			
	persuasive				.29905			
Reflection	reflective					.72041		
	inquiring					.58931		
Analytical (Sciences)	theory-driven						.47920	
	analytical						.46089	
Problematic	bold	.46779			.41575			.44503
	thoughtful			.40263		.30990		-.38149
	insightful			.40893	.33060	.37070		-.36252
	well-reasoned		.29741					
% of variance accounted for by factor		21.8	13.1	8.1	5.5	4.9	4.5	3.9

Summary of ANOVA of Clusters by Disciplines

F Value	4.70502	.55937	.67140	6.89623	3.73450	5.00596	
Significance of F Value	.001	.692	.613	.000	.006	.001	

[Multivariate Test of Significance: Value = .63581; Approx F = 3.10988; df = 24; Significance = p<.0001]

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j. "Good" Writing

Humanities (Celebratory):
- clever with word play
- vivacious
- eloquent
- aesthetically satisfying
- natural

k. Social Science (Cognitive):
- non-trivial
- relevant
- plausible
- significant

Arts (Creative):
- creative
- imaginative
- interesting
- persuasive

Natural Sciences (Analytical):
- theory-driven
- analytical

l. Generic and Transferable:
- clear
- precise and succinct
- organized
- accurate in punctuation and grammar
- cohesive
- understandable

Problematic:
- bold
- thoughtful
- insightful
- well-reasoned

m. Questions on Writing for Professions
- Expect students to write as they would for colleagues in field of study. (Only 21% agree.)
- Design writing assignments to help students improve communication skills for careers. (52% agree)
- 1 to 3 writings per semester.
- Favor interim deadlines.
- Do not require multiple drafts.

n. Product vs. Process Questions:
1. I establish interim deadlines for parts of major writing assignments to help students budget time.
2. Students need to write multiple drafts of a major assignment before submitting a final product.

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3. My assignments are spread out throughout the semester.
4. I confine my writing assignments to a single substantial project due at the end of the course.
5. I am more interested in the product that students write than in the process to produce writing.

o. Faculty Understanding of Writing
   Writing follows thinking.
   Writing is for evaluation.
   Writing is linear and transferable.

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